

Claims

1. Rolling bearing comprising at least one ring provided with raceway and rolling elements to engage said raceway, wherein said ring and raceway comprise a ball bearing steel, said ring and/or rolling elements having a nickel-phosphorus coating characterized in that said coating comprises at least 9% by wt phosphorous.
2. Rolling bearing according to claim 1, wherein said coating comprises at least 70% by wt. Ni and 9-20% by wt. phosphorus.
3. Rolling bearing according to one of the preceding claims, wherein between said bearing steel and the coating an adhesion layer is provided.
4. Rolling bearing according to claim 3, wherein said layer comprises a nickel-layer.
5. Rolling bearing according to claim 4, wherein said layer has a thickness smaller than 1  $\mu\text{m}$ .
6. Rolling bearing according to one of the preceding claims, wherein said coating has a thickness between 2-30  $\mu\text{m}$ , preferably 10-20  $\mu\text{m}$  and more preferably about 15  $\mu\text{m}$ .
7. Rolling bearing according to one of the preceding claims, wherein said ball bearing steel comprises about 1% by wt. C, 1,5% by wt. Cr and balance Fe.
8. Rolling bearing according to one of the preceding claims, wherein the outer surface of the rolling elements comprises a ceramic material.
9. Rolling bearing according to one of the preceding claims, wherein the outer surface of the rolling elements comprises a low friction coating.
10. Method for producing a rolling bearing comprising at least one ring provided with raceway and rolling element to engage said raceway, wherein said ring and

raceway comprise a ball bearing steel, wherein said ring and/or rolling elements are coated with a nickel-phosphorus coating, characterised in that that before coating said elements a striking-layer is provided.

5 11. Method according to claim 10, wherein said striking-layer is electrolytically applied to said elements.

12. Method according to claim 10 or 11, wherein said ring and/or rolling element are produced from a ball bearing steel and after hardening and possibly finishing are  
10 subjected to a machining step wherein about the same amount of material is removed as is deposited during subsequent depositing of the nickel-phosphorus coating.

13. Method according to one of the claims 10-12, wherein said coating comprises chemical deposition.

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14. Method according to one of the claims 10-13, wherein the rolling elements are coated and said coating comprises moving of said elements in a bath during coating.

15. Method according of one of the claims 10-14, wherein after coating the rolling  
20 elements and ring are directly assembled.